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A Technique of General Anaesthesia in Ruminants

by

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The increasing interest of physiologists in the problems of ruminant digestion has focused attention on the need for a satisfactory method of general anaesthesia in sheep and goats, for such investigations often require preliminary surgical preparation of the animals in order to make accessible for later study some part of the alimentary tract; and the operations involved are usually major surgical procedures occupying one and a half to two hours. The various difficulties encountered in the use for this purpose of the usual anaesthetics whether volatile (ether, chloroform) or non-volatile (nembutal) are well known to workers in this field. When ether or chloroform is given by means of a mask as is usually the case, saliva and regurgitated rumenal contents accumulate in it and, owing to the difficulty of maintaining a clear airway, are likely to be aspirated into the respiratory passages. The dangers attending the use of chloroform in any but skilled and experienced hands are too familiar to need mention here; and although ether is safer, its use entails the possibility of post-operative bronchopneumonia, to which ruminants seem to be prone.

For such reasons as these, nembutal is generally preferred; but it, too, has its drawbacks. When nembutal is injected intravenously, induction is rapid and quiet, but as Wright (1946) has emphasized, there is no standard scale of dosage; and there appear to be wide variations in susceptibility to this drug among ruminant animals. The margin between the dose producing full anaesthesia and that causing respiratory and cardiac arrest is not wide in these species, and an initial overdose may have unfortunate consequences. Moreover, and this is perhaps the most serious disadvantage, further injections are required during a lengthy operation. Recovery is quiet, though rather slow; post-operative complications are infrequent.

In a study of the absorption of carotene and other substances from the ruminant digestive tract (Dewar, Goodwin & Gregory, 1946) the need arose for repeated aseptic abdominal operations upon sheep and goats; and the above considerations led the writer to explore the possibility of using a technique of anaesthesia previously introduced (Gregory, 1946) for experimental aseptic surgery upon dogs and cats, namely cyclopropane-oxygen given by a closed circuit method with absorption of carbon dioxide, and administered through a cuffed intratracheal tube.

Cyclopropane is a gas with a characteristic and not unpleasant smell. It is comparatively expensive and in mixtures with oxygen is explosive, but these drawbacks are offset by the fact that since it can only be used effectively in a completely closed circuit, its use becomes economical and with reasonable care, quite safe. The great potency of this anaesthetic enables full surgical anaesthesia to be obtained with a mixture of about 35 per cent. of the gas in oxygen. This, and its comparative freedom from toxic effects on heart, lungs, kidneys or liver, have led to its present extensive use in major surgery in the human.

A few workers have investigated its pharmacological properties in acute experiments on animals, and the technique of its routine use for surgery in cats and dogs has been described by the writer in a recent publication (Wright, 1946).

Cyclopropane-oxygen anaesthesia may be induced in sheep and goats as in cats and dogs by the use of a simple mask, but this method involves the difficulty that owing to the rapidity of recovery from this anaesthetic, less than a minute is likely to be available for intubation of the trachea after removal of the mask for this purpose (see below). This method was nevertheless employed by the writer quite successfully in early trials; it has, however, since been abandoned in favour of a superior procedure, namely, the use of minimal amounts of nembutal intravenously. This provides an interval of several minutes after induction for intubation.

After insertion of the intratracheal tube, the cuff is inflated to make an airtight joint with the trachea and the tube is connected with the soda-lime container and rebreathing bag. The circuit is then partially filled with a mixture of cyclopropane and oxygen and anaesthesia so maintained as long as desired.

Apparatus.—The assembly of intratracheal tube, air-tight soda-lime container and rebreathing bag is shown in Fig. 1. Cylinders of cyclopropane and oxygen are connected with the circuit by means of the side-arm and a Y-tube.

The soda-lime container has a volume of about 500 ml., and is filled before use with large granules of soda-lime, preferably the dust-free variety sold for use with human anaesthetic apparatus. Failing this, ordinary soda-lime granules may be used provided as much dust as possible is removed beforehand by sieving. A thin layer of cotton-wool is placed at each end of the can to act as a filter.

For intubation, a laryngoscope is essential, but a suitable one is very easily made (Fig. 2). It is similar to those used for human beings, the only difference being that the blade is longer. Tongue forceps are also required. The intratracheal tube is of the Magill pattern, size 9 (Charles King & Co., London); for easy introduction it is stiffened by passing down it a piece of straight brass rod of suitable length; this is withdrawn as soon as the tube is in the trachea.

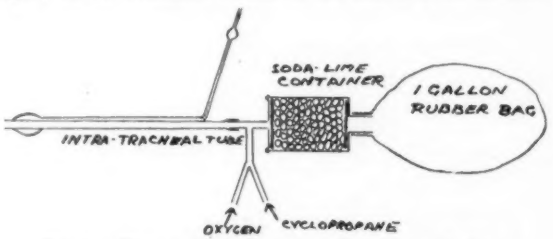

FIG. 1.—The assembly of intratracheal tube, soda-lime absorber and anaesthetic bag.

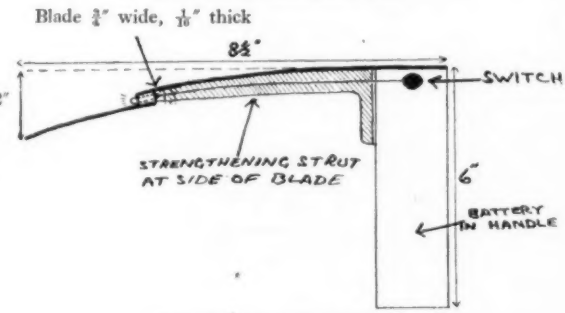

FIG. 2.—The laryngoscope.

Procedure

1. *Induction.*—The animal is restrained on its side while nembutal (1 gr. per c.c.) is injected into the jugular vein. The injection is made fairly slowly and is stopped *as soon as signs of anaesthesia begin to appear* (flaccidity of the jaw and limbs, closure of the eyes, slow regular respiration). The object of this injection is only to produce temporary anaesthesia of sufficient depth to permit of intubation of the trachea, a procedure which takes no more than a few minutes in all. If this is borne in mind, there is no likelihood of an overdose of nembutal being given. At this stage the animal is transferred to the operating table on its back or side and the trachea intubated as follows.

2. *Intubation and Maintenance of Anaesthesia.*—An assistant draws the tongue out of the side of the mouth with forceps, opens the jaws manually and fully extends the head; this latter point is important as it renders the subsequent procedure easy. The laryngoscope is then introduced and the vocal cords and larynx are easily seen. Under direct vision the intratracheal tube is passed into the trachea and the metal rod withdrawn. The cuff is then inflated by injecting air into the side-tube and the tracheal tube connected to

the soda-lime container. Oxygen and cyclopropane are now run into the circuit in the proportion of approximately 6 : 1, until the bag is partially filled. If too much cyclopropane is introduced and breathing ceases, a little more oxygen is added to dilute the mixture and the bag gently compressed a few times to ventilate the lungs; breathing soon recommences. As the effect of the nembutal wears off, further small additions of cyclopropane will be required as well as replacement of the oxygen used. The depth of anaesthesia is maintained as desired by addition of either gas. Chewing or swallowing movements, or oesophageal waves, indicate that anaesthesia is too light. A practical point is that the head should not only be sloped downwards to permit free drainage from the mouth, but should also be fixed, preferably on a shelf-like extension of the table, otherwise the intratracheal tube may be pulled out by movements of the head if anaesthesia is accidentally allowed to become too light. At the end of the operation the cuff is deflated and the tube removed. Recovery is quiet and the animals are usually conscious and sitting up in about two hours.

Two points only appear to need emphasis : (1) the dose of nembutal required is the minimum that will enable intubation to be performed ; (2) intubation is easy provided the laryngoscope described is used and the head is fully extended.

Acknowledgment.—I am indebted to Dr. A. T. Cowie, of the National Institute for Research in Dairying, Reading, who tried the method at an earlier stage in its development, for his helpful comments on its use. The laryngoscope and closed-circuit apparatus was made by Mr. J. McCarthy in this laboratory.

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Coccidiosis in the Dog: Dosage of Sulphamezathine in Relation to its Potential Use

by

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Aetiology

Coccidiosis in the dog is generally due to coccidia of the genus *Isospora*. *Eimeria* do occur but have only been recorded once or twice (Wenyon, 1926). Gassner (1940) found that 79 per cent. of 320 dogs examined harboured coccidia, though in 42 per cent. they were present only in very small numbers. The following table from Gassner's paper gives details of four species and their relative incidence in the U.S.A.

Table I

Measurements of Coccidial Parasites and Percentage of Incidence in Dogs Examined

Name	Oöcysts (μ)	Sporocysts (μ)	Sporozoites (μ)	Incidence (per cent.)
I. felis (Wenyon, 1923) ..	40–42 × 31–32	19–22 × 13–15	16–19 × 3·9–4·2	6
I. rivolta (Grassi, 1879) ..	23–24 × 15–16	15–16 × 9·7–11·5	13·8–14·5 × 2·5–3·0	20
I. bigemina (Stiles, 1891), small ..	10–12 × 8–9·6	7–8·6 × 8·5–9·0	Not measured	71
I. bigemina (Stiles, 1891), large ..	14·86 × 12·55	9·5–10·8 × 8·0–9·4	Not measured	3

Gassner sectioned the intestinal tract at 3-inch intervals and found the lower part of the jejunum and upper part of the ileum to be the most heavily parasitized.

An unusual feature of *I. bigemina* is that it may be passed in the faeces in a sporulated condition and direct infection of other dogs may occur. During the acute phase, however, oöcysts may, according to Becker (1934), be passed to the exterior more rapidly and in an unsporulated state, when, of course, the usual interval for sporulation has to elapse before the oöcysts are infective for other dogs.

Coccidiosis in the dog is generally diagnosed in kennels where large numbers of dogs are kept. The disease is frequently initiated by a carrier animal kept in rather insanitary and possibly crowded conditions with a number of other dogs. Unhygienic conditions are not, however, necessary and the use of the ordinary carbolic disinfectants may favour the survival and development of coccidial oöcysts by reducing the bacterial flora. The only disinfectant proven to be suitable for the destruction of coccidia is ammonia, the value of which was discovered by Horton Smith *et al.* (1940).

Diagnosis

The symptoms of the disease are those of enteritis, namely, diarrhoea with or without mucus and blood, and emaciation. Diarrhoea may, however, be observed only during the acute stage. In consequence, as occasionally in other animals, the diagnosis of disease due to coccidia is not always easy and cannot in all cases be related to the number of coccidia seen in a sample of faeces at a single observation. The clinical findings and flock, herd, pack or kennel history have to be considered together with the laboratory findings, except in cases where the result of the laboratory investigation is very definite.

Treatment

So far as is known there is no definite evidence of the activity of sulphonamides against coccidia of the genus *Isospora*. A number of species of the genus *Eimeria* are, however, particularly susceptible to "Sulphamezathine" (sulpha di methyl pyrimidine). In view of its possible use for the treatment of coccidiosis in the dog it was considered desirable to determine what dosage routine would attain a blood concentration of the drug that was likely, when compared with the response of various species of *Eimeria* to "Sulphamezathine," to prove effective for *Isospora*.

At a dosage rate of 0·05 gramme per kg. body weight (= 0·35 grains per lb.) twice daily, with the first "loading" dose double, a minimum blood level of "Sulphamezathine" of not less than 3 mg. was maintained after the longer overnight interval between doses.

Such levels are effective in ruminants, rodents and birds against several species of *Eimeria*. By analogy the course of treatment should last for five or six days. Incidentally, such levels are generally in addition bacteriostatic for susceptible bacteria.

If the 0·05 gramme dosage routine proved ineffective, then 0·1 gramme per kg. (= 0·7 grain per lb.) first dose double, could be used.

Tables and graphs of the data of the blood-levels attained with various dosage routines are attached. (*See opposite page.*)

For the estimation of the blood levels of sulphamezathine the method of Rose and Bevan was used.

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VETERINARY EDUCATIONAL TRUST

The Treasurer of G.H.Q., C.M.F., Riding Club, 24th Guards Brigade, Trieste, Italy, which has just wound up its activities, has forwarded a cheque for £15 to the Veterinary Educational Trust, which has also received from Baron de Waldner, owner of the Derby winner, Pearl Diver, a donation of £25 as a contribution towards the enlargement of the library now being established at the Equine Research Station at Newmarket.

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Brighton Dog Show on September 8th will be held in aid of the Trust, while Bromley (Kent) show promoters have promised to give their support to the Foundation.

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Lewis's Library Catalogue Supplement.—Membership of Lewis's medical, scientific and technical lending library (136, Gower Street, W.C.1) has proved a boon to many of our readers, who will be glad to learn of the issue of a supplement to the revised edition of the catalogue published in 1943. The immense variety of scientific books in this well-known library has been catalogued with great clarity in both Part I, Authors and Titles, and Part II, Index of Subjects with Names of Authors: the supplement represents an addition of 117 pages to the 714 in Part I of the 1943 edition and of 53 pages to the 203 devoted to the subject index, and brings to nearly 30,000 the number of titles listed. The price of the main edition is 12s. 6d. net to subscribers to the library; to non-subscribers 25s. net. That of the supplement, which covers the period January, 1944 to December, 1946, is 2s. 6d. to subscribers; to non-subscribers, 5s.

BLOOD LEVELS OF SULPHAMEZATHINE IN DOGS—AVERAGE RESULTS FOLLOWING DOSAGE ROUTINE IN WHICH FIRST DOSE WAS NOT DOUBLE

Dosage Rate (once daily)	After dose 1 (hours)				After dose 2 (hours)				After dose 3 (hours)				After dose 4 (hours)				After dose 4 (hours)				
	2	4	7	24	2	4	7	24	2	4	7	24	2	4	7	24	26	28	31	48	50
0·05 gm./kg. (1 dog)	2·3	2·3	2·0	1·4	3·6	3·8	2·4	1·2	4·9	7·6	5·3	1·6	8·4	4·6	3·3	0·2	Trace	1·4	—	9·5	—
0·1 „ (3 dogs)	3·2	3·2	2·7	1·4	4·4	7·2	4·2	1·8	5·7	5·6	6·1	2·1	3·7	2·8	3·6	1·9	2·8	1·9	0·9	1·1	—
0·2 „ (5 „)	3·5	3·1	4·3	2·2	7·8	7·6	6·8	3·5	8·0	7·5	6·2	4·6	6·0	6·2	4·2	3·3	3·3	3·0	1·9	2·1	6·3

Dosage rate (twice daily)	After dose 1 (hours)			2	After dose 3 (hours)			4	After dose 5 (hours)			6	After dose 7 (hours)			8	After dose 8 (hours)				
	2	4	7	17	2	4	7	17	2	4	7	17	2	4	7	17	19	21	24	34	36
0·05 gm./kg. (1 dog)	2·5	1·5	3·2	1·7	3·3	2·5	2·0	1·9	3·1	1·7	9·6	2·3	3·5	4·0	4·1	1·7	2·1	1·7	0·7	0·9	—
0·1 „ (6 dogs)	3·5	2·3	3·4	2·8	5·1	5·4	4·8	4·9	5·5	6·1	6·6	4·3	4·3	6·2	6·0	4·3	3·2	3·4	3·6	2·3	3·3

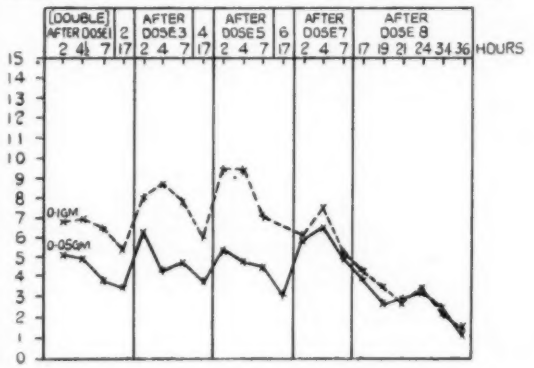
BLOOD LEVELS OF SULPHAMEZATHINE IN DOGS—AVERAGE RESULTS FOLLOWING DOSAGE ROUTINE IN WHICH FIRST DOSE WAS DOUBLE

Dosage rate (1st dose double) [4 dogs each level]	After dose 1 (hours)				After dose 2 (hours)				After dose 3 (hours)				After dose 4 (hours)								
	2	4½	7	24	2	4	7	24	2	4	7	24	2	4	7	24	26	28	31	48	50
0·05 gm./kg. *once daily*	6·7	5·4	4·4	2·4	6·8	5·6	5·1	3·7	5·0	5·7	4·2	2·6	4·0	4·7	3·4	2·4	2·1	1·8	2·7	1·9	1·4
0·1 „ „	5·5	4·9	4·4	2·4	9·8	7·8	5·7	3·0	6·4	5·4	3·9	2·5	5·1	4·3	4·1	2·3	2·1	2·0	2·2	1·9	1·3
0·2 „ „	11·1	10·7	8·0	2·2	7·1	7·1	6·7	2·7	8·1	5·3	4·5	1·9	5·9	7·2	5·8	2·2	2·2	1·8	2·2	2·6	1·4

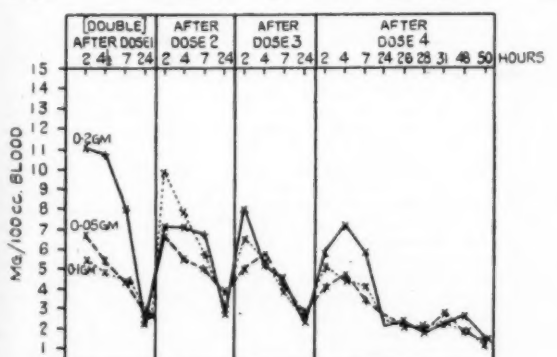
Dosage rate (1st dose double)	After dose 1 (hours)			2	After dose 3 (hours)			4	After dose 5 (hours)			6	After dose 7 (hours)			8	After dose 8 (hours)				
	2	4½	7	17	2	4	7	17	2	4	7	17	2	4	7	17	19	21	24	34	36
0·05 gm./kg. *twice daily*	5·1	5·0	3·7	3·4	6·3	4·2	4·8	3·7	5·5	4·9	4·4	3·2	5·8	6·6	5·2	3·8	2·7	2·9	3·1	2·4	1·2
0·1 „ „	6·8	7·0	6·5	5·3	8·1	8·8	7·9	6·0	9·5	9·5	7·1	4·3	6·2	7·5	5·1	4·3	3·5	2·8	3·3	2·2	1·5

BLOOD-LEVELS OF SULPHAMEZATHINE IN THE DOG, EXPRESSED IN MG./100 C.C. BLOOD

Dosage Rates of 0·05 gm. and 0·1 gm./kg. Twice Daily.



Dosage Rates of 0·05 gm., 0·1 gm. and 0·2 gm./kg. Once Daily.



MINISTRY OF AGRICULTURE NEWS SERVICE

Disinfecting Poultry Containers to Avoid Disease.—Owing to the prevalence of disease among poultry, particularly of fowl pest in this country just now, the Ministry invites the attention of all those engaged in handling poultry to the risk there is in using dirty crates or boxes for taking poultry from one place to another. Unless the receptacles are thoroughly disinfected every time they have been used, they may be the means of spreading infection; for with some diseases, it is more than likely that other birds will pick up infection left behind by affected poultry.

It is only by thoroughly disinfecting all crates and boxes like this that safety can be ensured. And it is not difficult. The most satisfactory way is to scrub them well with a solution made up by adding half a pound of washing soda to every gallon of hot water. Or any disinfectant approved by the Ministry for the purpose of Diseases of Animals Acts may be used. All such disinfectants are sold in containers bearing labels stating that they are so approved and giving instructions as to how they are to be diluted.

Another suitable method of disinfection is fumigation with formaldehyde gas. But this takes longer and involves the use of a gas-tight chamber, so those who are not familiar with it would be well advised to follow one of the other methods.

. . . . . .

The Drive for Clean Milk.—Vast quantities of milk were formerly lost to the country through souring during warm spells in summer. With the introduction of the National Milk Testing and Advisory Scheme, however, keeping quality throughout the country has improved, according to expert opinion and available figures.

Launched in May, 1942, after a few months experimental run in only four counties, the scheme purposes to list regularly the milk of all producers for keeping quality. The results of such testing serve two main purposes: to prevent the inclusion of sour milk in the bulk (and a single churn of dirty milk might cause the loss of a whole consignment) and to find out the farmers whose methods of production called for improvements, so that they can be given help and advice.

To-day, the milk of over 90 per cent. of our producers is being regularly examined for keeping quality by licensed testers under the technical supervision of the Advisory Bacteriologists. The large depots and dairies employ their own testers for this purpose, while the supplies of the smaller dairies and producer-retailers are covered by the Ministry's National Milk Testing Service. On the results of these tests, all producers whose milk is found to be unsatisfactory receive the expert assistance of the N.A.A.S. Nor is advice restricted to farmers; the dairies also are advised about keeping quality, especially on the cleanliness and sterility of the churns returned to the farms. And "sanctions" can be applied to persistent offenders, whether farmers or dairymen.

The Aims and Programme of the Veterinary Educational Trust

[The addresses reported below were delivered to the April General Meeting of the Yorkshire Veterinary Medical Society in York, by Dr. W. R. Wooldridge, M.SC., PH.D., M.R.C.V.S., Scientific Director of the Veterinary Educational Trust, and Professor Wm. C. Miller, M.R.C.V.S., F.R.S.E., Director of the Trust's Equine Disease Research Station at Newmarket.]

Dr. W. R. WOOLDRIDGE: I greatly appreciate the invitation to address you, for unless the Veterinary Educational Trust has the full support of the profession, it is unlikely to achieve fully its several aims.

The Trust is an independent organization. It is not under the control of the Government; it receives no financial or other assistance from the Government. It is not under the control of any other organization, although the Royal College of Veterinary Surgeons and the National Veterinary Medical Association are represented *ex officio* on its Council by their Presidents. It was started in 1942, and it really originated as a contribution towards the stimulation of a more determined effort to improve facilities for veterinary education and specialization. When President of the N.V.M.A., one of the first things I did was to ask the Ministry unofficially what they were going to do about the recommendations of the first report of the Loveday Committee. The answer I received was: "Nothing until the War is over." This did not seem to me sufficient. Having already been connected with N.A.R.P.A.C., where I had received considerable information concerning the running of animal welfare societies, it seemed to be reasonable to believe that if we started an educational Trust, even without any financial backing, we might get considerable financial support. I contacted a number of people interested and connected with animals in one way or another, and in every instance found them sympathetic and prepared actively to support the project. I then told the Permanent Secretary of the Ministry of Agriculture what were our plans, and explained that being a member of the Loveday Committee I knew that much more had to be done, even beyond the Committee's apparently sweeping recommendations. The Trust was determined to encourage and stimulate these developments in all other ways connected with the advancement of veterinary education, research and practice. Only if the Government failed to implement the Loveday recommendations would the Trust try and assist with the basic developments. The formation of the Trust was announced at the Luncheon of the N.V.M.A. in September, 1942. It was not received enthusiastically by all the profession, partly because it was announced with such little warning, and partly because the idea of raising a capital sum of at least a million pounds put it beyond anything they thought possible. There was little active support at first from the profession—a few helped, but the bulk sat back and watched what was going to happen. That attitude is changing, and practitioners and public at home and abroad are now wanting to know how they can help. I believe this is because we have adopted the right policy—not to wait until we have a large income from invested capital, but to spend to achieve our acknowledged aims forthwith. I hope veterinary surgeons will take an ever increasing interest in the many developments of the Veterinary Educational Trust, and will encourage financial support from all quarters.

What are these aims? The Trust Deed is drawn up in wide terms. It enables us to do anything that helps forward veterinary research, science and practice; what we do is only limited for financial reasons. We have, therefore, to decide what type of work has priority. In the strictly educational fields, we are trying to assist deserving students when necessary to complete their courses; to help young graduates who want to specialize and undertake further training; to encourage those who have had a period of research training to continue with two or three more years of independent work to develop their selected branch of veterinary science. Later we want to offer travelling fellowships, in order that individuals may travel to centres abroad and either stay in a laboratory, which may not necessarily be a veterinary one, or to gain experience in the field and thus on their return advance knowledge in this country. We began by establishing about 15 undergraduate scholarships to cover the whole course, but these scholarships have been temporarily discontinued owing to Government insistence upon such a high proportion of ex-Service entrants into the colleges. Instead, we have now instituted undergraduate studentships, which we award to individuals who have completed successfully one or more years of their studies, and then, through no fault of their own, would be prevented from finishing their courses without financial assistance. We have awarded over a dozen such studentships, which vary in amount from £30 to £100 per annum. We have also established Final Year Studentships, one of these being given annually to the best student of each college for the first four years of study. They consist of the payment of final year fees plus a prize of books. Fourteen of these have so far been awarded.

Also within the educational sphere, we hope one day to be able to help the colleges to equip themselves better for their broad training, and to offer them senior research fellowships of professional standard so that they can be manned by a larger number of specialists than is possible under Government grant.

In the research field, we have Research Training Scholarships and Research Fellowships. We are about to advertise a small number of research training grants of the value of approximately £340 per annum, intended for recently qualified graduates who wish to specialize.

Research Fellowships are for those wishing to develop independent research, and although they are sometimes specified for work in a special branch of veterinary knowledge, they are never tied down to a particular problem. The emoluments of the Trust's Research Fellows vary with the age and experience of the individual and range from £450 per annum upwards to £800 per annum or more. Altogether we have so far awarded nine Research Fellowships.

In addition to these educational and research facilities for training personnel, we are establishing research centres, partly because we believe that independent research stations are desirable for research progress, and partly because it has been shown that specialized research centres greatly encourage the development of specialized personnel. We began by setting up an Equine Research Station for several reasons. Firstly, because little research was being done on the horse; secondly, because the likelihood of Government assistance for equine research was remote, and thirdly, because of the need to create permanent posts of an equine specialist character as an encouragement to young men to specialize. Between the wars, experience at Cambridge convinced me that permanent development cannot be expected along specialist lines if no senior posts are available for those who specialize. Many specialized at that time and found no means subsequently of continuing their work, and they went either into the Ministry or into practice. This was bad for the profession. The Equine Research Station means there will be at least a few posts for those intensively studying the horse. Later we believe the colleges will create posts for these specialists too and some will go into specialist practice.

We are now engaged upon establishing a Canine Research Station. We have appointed a Director and Senior Research Worker, and are looking round for the actual place for the centre. It might seem ridiculous to talk about having a research station when there are so few people to man it, but we believe that unless we begin we shall never break the vicious circle of no posts no staff, and no staff no posts. A concrete and determined beginning must be made.

Other research stations are envisaged, including a group of stations devoted to the various species of farm livestock. These developments are overdue, and we believe veterinary science will gain as much from the creation of these research stations as various branches of the sciences of chemistry, physics and biology have gained from the establishment of research stations, particularly between the two World Wars.

We have not created specific travelling fellowships yet, but we have sent three individuals to the United States, two to work on horses and one on bovines. This has created considerable interest in our activities abroad, and indeed others seem to be simulating our activities. At the moment, we have a research fellow from the Argentine attached to our Equine Research Station for a year, a practice we hope will develop.

We are well aware that there are many things wrong with the Trust; we realize that there are tremendous hurdles to get over if we are to go forward with our project; we are not content to sit back and say they are insurmountable. We believe we must plan boldly with a wide vista. Adverse criticism we shall receive, but this is best overcome when our critics see us accomplish things. I hope most sincerely that the veterinary profession will realize to the full the potentialities of the Veterinary Educational Trust, and will help it forward in every way possible. The Trust is a small thing of to-day, but we believe it can accomplish much for the profession and for the animal-owning community.

It is, I think, highly significant that the work of the Trust has the unqualified support of the National Farmers' Union, which represents something approaching 170,000 working farmers, and the full backing of the great national weekly agricultural newspapers, beside the Milk Marketing Board and a number of large firms interested in the prosperity of agriculture.

In conclusion, may I again express my thanks to the Society for offering me this opportunity of talking to you about the Trust, and repeat that the Trust will always be glad to assist the profession in any way it can. I may say that we in the Trust gratefully accept the good fortune which has enabled us to appoint Professor Miller

as Director of the Equine Research Station, which appointment I think you will agree bodes well for the future of this Station.

The Equine Research Station

Professor W. C. Miller said he wished to thank the members of the Yorkshire Division for the invitation to address them. Dr. Wooldridge had outlined the main general programme of the Veterinary Educational Trust, and it fell to him to deal with one specific activity of the Trust, the first of its research stations, in rather more detail.

The Equine Research Station had been established at Newmarket during the latter part of last year, through the generosity of Lady Yule and Miss Yule, who had made available their premises at Balaton Lodge, and secondly by the kindness of Major Durham Matthews, who had made Lanwades Park available.

At Balaton Lodge there was a residence and a well-designed set of buildings—some round a quadrangle, a row of loose-boxes, isolation premises and other buildings suitable for use as *post-mortem* rooms, laboratories and garages. These buildings had been in the occupation of the military authorities throughout the war, and they had been left in a state which required considerable work to renovate them and make them habitable. A great deal had already been done, but there was still much to do before the Station would be fully equipped. The paddocks available were limited in extent, but were capable of being made quite useful. He would remind members that paddocking for horses was very important, since such a high proportion of a horse's food intake came from grassland, direct and as hay. It was fortunate that at Lanwades Park there were greater facilities for providing horse paddocks.

Lanwades Park consisted of a medium-sized mansion house with about 120 acres of land. The major portion of this land was at present in the occupation of the War Executive Committee, but arrangements had been made for its gradual release from food production in the future. The house was well built, and would provide facilities for a library, museum, reading rooms, as well as a residence for people engaged on research. The house was situated in well laid-out grounds. The property was situated on fairly typical land for the Newmarket area; most of it was light or medium loam overlying chalk; there were occasional patches of sand, and it lay well for sunshine and drainage. A commencement had been made with the work by securing a small herd of pony mares to form a foundation for a larger stud later. Ponies, they would all agree, were convenient equine material on which to conduct preliminary work and to make routine detailed observations. They might be regarded as similar to guinea-pigs for other research studies. The property as a whole was practically self-contained, being provided with its own water, electricity, drainage and similar services.

General Policy and Programme.—Speaking generally, it had been decided to concentrate principally upon problems of a fundamental nature. The horse matured slowly over some four to five years, and it was necessary to lay sound foundations upon which to build in future. Much of the work would be of a long-range nature, and generally speaking, short-range *ad hoc* work would take a somewhat secondary place.

Among the problems which it had been decided to study were the following:—

1. Feeding in relation to growth, including a study of the function of minerals in bone metabolism.

2. The influence of feeding of the mare on lactation, and indirectly on the growth and development of foals. It might be observed that while a great deal was known in connection with the feeding of cows for milk production, and workable principles had been established, yet much of this information had not yet a proper application to the horse.

3. A study of reproduction in both mare and stallion in relation to fertility and sterility. This was a big problem and a most important one. The general average of the fertility rate in horses as a whole, and particularly in thoroughbreds, was too low for equanimity. The only breeds of horses which had a high fertility rate were the herds of ponies which were run under semi-wild conditions in various parts of the country, and the members would know that under these conditions many other points of good management might be neglected.

4. The big problem of parasitism in the horse, and specifically strongylosis, formed a part of the plan. Parasitism in some studs had increased during the war owing to ploughing up of paddocks and the restriction of the horses to smaller acreages of grass. This might be a good thing in the long run, since when the paddocks came back into use many of them would have been cleansed of their worm burden by ploughing and cropping processes. A policy of routine ploughing of a proportion of the grassland might possibly become a future feature. The re-establishment of pastures, seed mixtures, cultivations, manuring, etc., linked closely up the two problems of strongylosis and better nutrition. It was perhaps fortunate that the reduction of the grazing area during the war had coincided with the introduction of more modern methods of treatment, including the use of phenothiazine. Without its assistance the problem of parasitism in horses would have undoubtedly been more serious.

After the Station became properly established it was intended, provided there was a call for it, to develop a diagnosis service behind the practitioner. He believed that this might prove very useful, particularly in connection with certain routine infections, inflammatory reactions of the intestines in foals (including foal diarrhoea), in respiratory diseases and probably in other conditions also. He thought it should be one of the functions of the Station to keep a watch for diseases which might be introduced from overseas, in view of the very rapidly developing facilities for speedy horse transport, now that horses were being flown from Britain to America almost overnight, and in a further development of reciprocal traffic there was considerable risk that infectious diseases not now present in Britain might be introduced. He might remind members, for example, of the potential risk there was from equine abortion of virus origin, which was proving so serious a handicap to breeders in some other parts of the world.

Other Activities.—As already mentioned, a library was being established at Lanwades Park. It had been decided to call this the Derby Library, since its foundation began with the offer of assistance from owners of horses which had already won the Derby. The library was of the greatest importance for reference and study. It was hoped, in time, to gather as much information about the horse as possible—not only scientific information but information with regard to performance, records, data, etc., which might one day establish the library as a recognized centre for all information about horses. An enormous amount of information was at present scattered, and it was often difficult for a worker or a private individual to know where he could obtain the information he might want.

A museum was also being established, and in the course of time it was hoped to build up a representative collection of typical specimens.

Educational Activities.—Those responsible for the Station hoped as time went on that it would be possible to develop facilities for education. For example, it was anticipated that later it might be possible to take students for short periods during their holidays, and give them opportunities to make themselves familiar with certain aspects of the work among horses. Similarly, young post-graduate workers, preferably with their own specific problems, would be welcomed, provided they fitted into the general lines of activity. Facilities for practitioners would be provided for short visits for *ad hoc* purposes and for discussions. Lastly, under this heading, they had taken some steps to provide short courses for training of studsmen, who might be in charge of valuable animals. It was hoped that courses of this sort would lead to a better understanding of the need for attention to hygiene, disinfection and cleanliness, etc., and to better co-operation with veterinarians in their treatment of sick horses.

Some of the above points were elaborated and Professor Miller pointed out that he had only attempted to give a general indication of the lines on which work was starting, and how it was hoped it would develop. Many aspects had not been covered, but they would agree that it was difficult to talk in a comprehensive way when the Station had not been established for much more than six months, especially in view of the prevailing difficulties of supply, etc. He thanked the members for their attention.

INTENSIFICATION OF RESEARCH EFFORT

Sir John Fryer, Secretary of the Agricultural Research Council, addressing the annual conference, in Edinburgh, of the Agricultural Education Association, stated that something like a doubling of the research effort within the next ten years was envisaged; he thought he was safe in saying it has the full sympathy of the Government.

Developments in animal breeding research were referred to by Professor R. G. White, of the Animal Breeding Organization. "In view of the importance of the livestock industry to agriculture," said Professor White, "research in animal breeding in the past in this country has been quite inadequate." In the application of science to animal breeding other countries had got ahead of this country, and this had led to the setting up of the new organization shortly after the war. One line they would pursue for a start, said Professor White, was a survey of the cattle and sheep breeds in the country—including some not very well known but of great commercial importance.

CLINICAL COMMUNICATION

Haemorrhagic Septicaemia

D. F. G. SMITH, Major, R.A.V.C.

The following clinical note on haemorrhagic septicaemia is recorded in view of what is believed to be a rare syndrome of this disease amongst buffaloes.

An outbreak occurred at the Military Farm, Nowshera (N.W.F.P.), in December, 1940, on which at the time there were 200 buffaloes and 200 cross-bred and Friesian cattle.

The disease commenced amongst adult buffaloes housed in two adjoining sheds and later spread to the cows which were accommodated nearby. In all, nine cases in buffaloes and three in cows occurred, all of which were fatal.

A particular point of interest was the curious predilection site of the swellings (usually located in this disease in the lymphatic glands of the throat). With the exception of two buffalo calves which died of acute septicaemia within twelve hours, the remaining seven adult buffalo cows all developed enormous swellings in the genitalia. Of the three buffalo cows, however, two developed the typical parotid-submaxillary swellings with ensuing apoplexy and the other developed a hyperacute mastitis which was fatal in four days.

These notes are chiefly concerned with describing the peculiar effect upon the buffaloes affected with this disease. A few hours after the initial rise in temperature, a small swelling commenced at the lower fornix of the vulva (see Fig. 1). It spread rapidly to the upper fornix and in as little as four hours assumed enormous dimensions (see Fig. 2). Death occurred (in all but one case) at periods varying between eight and 72 hours after onset of the disease.

The genital swellings, with the exception of one case (Fig. 3) were tense and acutely painful. Erosion of the vaginal mucous membrane occurred and considerable quantities of a yellow serous exudate, containing numerous Pasteurella organisms, oozed from these swellings.

Towards the end of the outbreak which lasted nearly three months, the disease appeared to lose some of its initial virulence. Haemorrhagic septicaemia serum was administered to all animals on the farm within a week of the occurrence of the first case. The last case (Fig. 3) occurred in an adult buffalo which, incidentally, had received 25 c.c. of haemorrhagic septicaemia serum 28 days previously. Death occurred six days later. The swellings in this case were pendulous and not very painful.

The outbreak was confirmed as haemorrhagic septicaemia by the Indian Military Veterinary Laboratory, Lahore, consequent upon examinations made of various specimens including internal organs.

Records show that the incidence of this disease was above average on military farms in India during 1940–41. The syndrome of the disease described in this note, however, occurred only at Nowshera.

Fig. 1.

Fig. 2.

Fig. 3.

Weekly Wisdom

The agricultural sum never comes out quite right. That's why farmers are traditionally pessimists. . . Farmers are always grimly conscious that whatever they do the result is unpredictable.—Major Lewis Hastings: "Dragons Are Extra."

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CONTROL OF MILK PRODUCTION

As will be noted from Mr. Bevan's answer to a question on the above, both of which are given in the Parliamentary Columns of this issue, by agreement with the Ministry of Agriculture, the Ministry of Health have decided that it will not be practicable to bring the Food and Drugs (Milk and Dairies) Act of 1944 into operation this year.

The effect of the Act will be to transfer to the Minister of Agriculture, from a day to be appointed by the Minister of Health, the registration of dairy farms and dairy farmers and control of clean milk production hitherto exercised by local authorities under the Milk and Dairies Order, 1926; and also make the Minister of Agriculture the licensing authority under the Milk (Special Designation) Regulations for producers of raw designated milk.

ABSTRACTS

[**Treatment of Actinomycosis of Bovines with Mercuric Chloride** (trans. title). Guilhon, J. (1946.) *Rec. méd. Vét.* **122**. 529.]

In this article Guilhon gives a short account of experimental work involving the use of mercuric chloride subcutaneously in cases of actinomycosis. The initial work done by Goetz, a German worker, in 1943 was prompted by the fact that many animals are liable to develop iodism when treated with iodine preparations, and that treatment normally has to be given by mouth.

The dosage recommended by Goetz is 10 c.c. of mercuric chloride in 1 : 1,000 aqueous solution, given every third day for three successive injections, then weekly till there are signs of a definite clinical cure.

Guilhon suggests modifying this system by injecting one dose daily for three consecutive days, followed by one injection every fifth or sixth day according to the severity of the case.

The injections are made subcutaneously into the neck or dewlap, and each injection contains 1 cg. of active principle of mercuric chloride.

It was found that it is necessary to inject 8 to 9 cg. of mercuric chloride into cattle of 300 to 500 kg. to obtain a definite cure in 35 to 40 days.

Guilhon noticed that at the beginning of the treatment, each injection is followed by a fleeting period of depression and a slight local inflammatory reaction. The reaction disappears at the end of a week.

He has not experienced any cases of mercurial poisoning even when the period of the injection was reduced to every five days. He also notes that it is not usual for a complete cure to occur before the fifth or sixth injection, and that he has experienced only one relapse and that in an animal which received only 6 cg. of mercuric chloride.

The author concludes that mercuric chloride will prove useful in the treatment of actinomycosis both when used alone, and in conjunction with iodine. He suggests that the most successful form of treatment would probably follow on the development of an organic preparation containing both iodine and mercury.

G. C. B.

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[**Form Variation in *Salmonella pullorum* and its Relation to X Strains**. Edwards, P. R., & Bruner, D. W. (1946.) *Cornell Vet.* **36**. 318-323. (11 refs.).]

Kaufmann has shown that the XII antigen contains three parts, designated XII_1, XII_2 and XII_3. The authors have shown that this observation accounts for the occurrence of B.W.D. in the progeny of flocks which contained no reactions to the agglutination test. By direct agglutination and agglutinin-absorption tests using standard laboratory strains (St) and strains (X) from flocks of the above kind, they were able to show that St strains were deficient in XII_2 and X strains in XII_1 and XII_3. Their observations also showed that newly isolated strains contained all three components in reasonable amounts. Usually growths from single colonies are composed of both St and X organisms, but spontaneous variation occurs, resulting in the production of one type only. Such variants are the St and X strains. The authors suggest antigenic formula IX, XII_1, $[XII_2]$, XII_3 for *S. pullorum* (brackets indicating strain variability). They also suggest that their findings should be taken into account in the preparation of pullorum antigen for routine testing.

A. W. G.

HANTS LEAD IN A.I SERVICE

At the annual general meeting of the Hampshire Cattle Breeders' Society, Mr. Geo. N. Gould, M.R.C.V.S., of Southampton, who was re-elected chairman, said that by the autumn the whole of Hampshire and the Isle of Wight would be served by the Society as well as parts of the adjoining counties. The H.C.B.S. would be the first centre to give a full service for all the dairy breeds.

Expansion this year had been considerable and nearly 6,000 cows had been inseminated up till the end of June, with an average conception rate of 69 per cent. Membership had increased to 1,112 in the same period.

* * * * *

Carmarthenshire F.U. is asking the Ministry to speed up the final official qualifying tests under the attested herds scheme, point-out that the long delay between the first successful test and the final meant a substantial loss of bonus and retarded the process of eradicating tuberculosis.

REVIEW

[**"Mille Questions d'Hygiene."** By Prof. Henri Violle (Professor of Hygiene, Marseilles). Published by Flammarion, Price fr.425.]

This book presents the reviewer with two difficulties in giving English readers a balanced view of its value. Firstly, that it is written in the form of question and answer on a very wide range of subjects; and secondly, that it is designed expressly for French medical students, and therefore covers much health and sanitary legislation in that country, of comparatively slight interest to an English veterinary surgeon. The author has certainly taken a large view of his responsibilities as a hygienist, posing and, in the main, answering such widely divergent questions as "What is the future of the human race?" "How can one disinfect glassware in restaurants and cafés?" "What is the role of domestic animals in the spread of mosquitoes?" or "Is present legislation sufficient to fight against alcoholism?"

But where dealing with diseases common to man and animals and on ground common to the medical and veterinary professions, many of Professor Violle's observations might well be taken to heart, *e.g.*, those referring to the role of bovines in the spread of human tuberculosis. Although he makes the statement that in individual bovines a series of abortions is common in Brucella infection, his views on this disease are sound—in fact his remarks on methods of preventing the spread of contagious abortion in herds are worth quoting: ". . . burn abortions and afterbirth; isolate aborting females; do not sell them; disinfect contaminated premises; do not introduce new stock into the herd for at least two months; keep whatever calves are born, they are less prone to the disease."

Even though this quotation may show the author's grasp of such ground as is common to medical and veterinary hygiene, the book is written almost entirely from the medical viewpoint, and is unlikely to find a place on the shelves of a veterinary surgeon.

MILK SUPPLY FOR THE DUBLIN DISTRICT

Recommendations of Tribunal of Enquiry

The recommendations of the recently published report of the Tribunal of Enquiry into the milk supply for the Dublin district, which was set up by the Minister for Local Government at the end of 1945, include the adoption of a new milk policy which will recognize the importance of the milk industry in the production area from the agricultural point of view.

The establishment of a Milk Board with wide powers over production and distribution is also recommended. This should consist of three nominated persons, including a chairman, whose functions would be to organize and direct the production, distribution and sale of milk and to encourage its consumption, step by step with increased production. Plants for the pasteurization of milk or the manufacture of milk products should be provided by the Board.

A Consultative Council to advise the Board is recommended. This would consist of representatives of producers, distributors and consumers, as well as specialists in the scientific and technical aspects of the industry.

Veterinary Services

Veterinary services should be augmented and improved, and services related to agriculture and public health unified. Each county should have a Chief Veterinary Officer.

Schemes should be initiated by the Department of Agriculture for the improvement of dairy stocks and farms and the control of animal disease. Such schemes should provide for the elimination of low-yielding cows, cow-testing, economic feeding of milch cows, especially with regard to winter feeding, improvement of cowsheds, dairies and yards, eradication of faulty milking and transport.

Milk sold should be limited to two grades—namely, higher grade milk and pasteurized milk.

Some of the general conclusions of the Tribunal are:—

While there has been considerable improvement in the quality of milk supplied to the Dublin area in the last ten years, the industry has not been adequately fostered from the agricultural point of view.

The quantity of milk produced has not been sufficient to meet the needs at all times of the year, and supplies have had to be obtained from outside sources which are open to objection on public health grounds.

Efforts to eradicate animal disease, particularly bovine tuberculosis, have been seriously inadequate.

Many aspects of milk production and distribution leave great scope for increased efficiency.

QUESTIONS IN PARLIAMENT

Warble Fly

COLONEL CLARKE asked the Minister of Agriculture if he is aware of the damage to the production of milk, beef and hides by the warble fly; and if he will now consider making an order under the Diseases of Animals Acts for compulsory dressing of all cattle, whereby the numbers of warble flies might be substantially reduced.

Mr. T. WILLIAMS: I am aware of the damage caused by the warble fly, but as the dressing of the cattle before March to destroy warbles would not be effective, the question of making an order does not arise at the moment.

COLONEL CLARKE: In view of the fact that sheep are now only to be dipped once a year, would not the police have time to see that such an order was properly carried out?

Mr. WILLIAMS: I understand that all warble flies that emerge between mid-March and the end of June are likely to give rise to another generation. That is why I feel that, at this moment, at all events, there is no point in making such an order.

Mr. JOHN LEWIS: Would it not be advisable to avoid compulsion, in the absence of adequate farm labour necessary for the application of the derris wash at the appropriate time; and is not my right hon. Friend aware that he might overcome this problem by prevailing upon the Minister of Food to pay different prices for designated hides according to the condition in which they arrive at his depots?

Mr. WILLIAMS: I should think that that question should be addressed to my right hon. Friend the Minister of Food.

Mr. BALDWIN: In view of the importance of this matter, and the great loss to the leather industry in this country, particulars of which are readily available from the Leather Merchants' Association, will the right hon. Gentleman look into this question again, because the trouble in the compulsory dressing of cattle is no more than in the compulsory dipping of sheep?

Mr. WILLIAMS: As I have already explained, treatment at this moment would be ineffective. It is only between mid-March and the end of June that treatment would be effective.

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Milk and Dairies Act

Mr. BYERS asked the Minister of Health when he proposes to bring into operation the Food and Drugs (Milk and Dairies) Act.

Mr. BEVAN: My right hon. Friend the Minister of Agriculture and I have come to the conclusion with regret that technical difficulties make it impracticable to bring the Act into operation this year. I am sending the hon. Member a copy of a circular in which local authorities were recently informed of this decision.

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National Service (University Students)

Mr. CHETWYND asked the Minister of Labour (1) how many students have been nominated for Class B release to attend universities and technical colleges in 1947; and how many have been granted release;

(2) how many students were granted Class B release to attend universities and technical colleges in 1945 and 1946.

Mr. ISAACS: Approximately, 4,250 students were released in Class B for the academic year 1945–1946 and 2,350 for the academic year 1946–1947. Up to July 15th, 1,695 students had been nominated for release in Class B for the academic year 1947–1948, but as releases will be effected shortly before the men are due to commence their studies, only a very few have so far actually been released in Class B.

Mr. PICKTHORN: While quite understanding the last sentence of the right hon. Gentleman's reply, will his office bear in mind the extreme necessity or desirability of allowing certainty to the men and to the academic institutions concerned as long before October as is possible?

Mr. ISAACS: Certainly, Sir. We will take note of that.

Lieut.-Colonel LIPTON: Can my right hon. Friend give an assurance that the men who would not be released in any case by the end of this year may be released in time to start their academic year this October?

Mr. ISAACS: No, Sir. That is the vexed question of Group 62 and Group 63. We cannot go beyond Group 62.

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Agriculture: University Degree Courses

Wing-Commander MILLINGTON asked the Minister of Agriculture whether he is in a position to make a statement on the Report of the Committee on Higher Agricultural Education, in the light of the consultations that have been taking place with the universities and other interested bodies.

Mr. T. WILLIAMS: Yes. The universities are sympathetic in principle with the Committee's proposals for raising the standard of degree courses in agriculture and horticulture and have carefully noted the detailed suggestions in the report relating to the form and content of the courses. The Committee's comprehensive plan for the development and allocation of graduate courses is generally acceptable to the universities, some of whom are hoping to introduce courses on the lines suggested this year or next.

The main administrative recommendation of the Committee was that responsibility for grants in aid of higher agricultural and horticultural education at universities should be transferred from my Department to the University Grants Committee as from the beginning of the academic year 1947–48 on the understanding that the University Grants Committee would set up a specialist sub-committee to provide it with the necessary technical advice. After consultation with the universities and in agreement with my right hon. Friend the Chancellor of the Exchequer I have accepted this recommendation. I shall naturally retain a close interest in the development of university teaching in agriculture and horticulture.

The constitution of the Agricultural Sub-Committee appointed by the University Grants Committee is as follows:—

Dr. A. E. Truman, F.R.S. (*Chairman*).
J. M. Caie, Esq., C.B.
Professor N. M. Comber, D.SC.
Sir Frank Engledow, KT., C.M.G., M.A., B.SC.
Sir John Fryer, O.B.E., M.A.
Sir Bryner Jones, C.B., C.B.E., LL.D., M.SC.
Dr. Thomas Loveday, M.A.
Professor H. A. D. Neville, M.A., B.SC.
Dr. W. G. Ogg, M.A.
Frank Rayns, Esq., O.B.E., M.A.
Professor E. R. Rideal, M.B.E., F.R.S.
Sir Edward Salisbury, C.B.E., F.R.S., D.SC.
Dr. Norman Wright, M.A.

I should add that while we are in general agreement with the Higher Agricultural Education Committee's assessment of the nature of the need for agricultural and horticultural education at universities neither my right hon. Friend nor I should be regarded as necessarily committed to acceptance of their views as to the future extent of the need. The Committee's recommendations relating to the nature of the provision of two-year courses to be made at Agricultural Colleges and the future of the National Diploma Examinations are still under consideration.

NOTES AND NEWS

Diary of Events

Aug. 13th.—Meeting of the Editorial Committee, N.V.M.A., at 36, Gordon Square, W.C.1, 2.30 p.m.

Aug. 20th.—Summer Meeting of the Eastern Counties Division, N.V.M.A., at King's Lynn (see Notice), 11.30 a.m.

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The Edinburgh Congress

Following the tragically enforced abandonment of the Provinces since our meeting at Great Yarmouth in 1939, it is clear from the number and evident enjoyment of the members here, with their ladies, as this message is being written (owing to printer's requirements) early in Congress week, that the return to peace-time practice could not have been marked more happily than by the selection of the Scottish Capital for this year's Congress, a choice most welcome, moreover, to the many delegates the Association has the pleasure and privilege of welcoming from overseas.

Edinburgh is, of course, independent of the need for special inducement to the visitor,-and this week a particularly well-balanced programme of scientific, ceremonial and social events supplements its perpetual appeal—fortified it may be said by the President's engagement that the social aspect assuredly would take precedence over political issues. With Whitehall thus properly subordinated to Princes Street, there is no chastening of enjoyment as the scroll of events provided by the Provisional Committee smoothly unfolds, save

for the sad reflection that so many N.V.M.A. stalwarts have passed on since the Association met here in 1934, and for the widespread regret that the then President, Mr. William Nairn, though well on the way to recovery after his recent operation, has been deprived through illness of a great welcome.

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Congress has opened with immense promise, having been inaugurated by the Scottish Metropolitan Division's reception at the "Dick" College on Sunday evening, when the large company of early arrivals in the City was splendidly entertained, after being received by Mr. James Milne, the President of the Division, and Mrs. Milne. A most enjoyable programme of Scottish national music was rendered by the Edinburgh Highland Reel and Strathspey Society, a very accomplished orchestra, and by the vocalists Mr. Robert Sutherland and Miss Ann Blake.

The actual business of the Conference was felicitously introduced on the Monday morning by the Lord Provost of Edinburgh's deputy, Bailie Bruce Turnbull, who accorded a more than cordial welcome to the N.V.M.A. and stressed the close association between the City and the College to which reference had been made by the President, Principal Mitchell, in introducing him.

The President then proceeded, with the great company of members present, to the Exhibition Hall, where, through the strenuous efforts with which they overcame all difficulties the representatives of the many important firms catering for the requirements of the veterinary profession have provided a most impressive display of drugs and surgical instruments. Professor Mitchell stressed the value of the exhibition to all parties and also, in declaring the display open, welcomed those in charge of the stands, many of whom were renewing personal acquaintance with their veterinary friends.

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A session of Council followed, mainly in preparation for the Annual General Meeting on the Wednesday, but of special interest as marking the appointment by the Association of a Public Relations Officer in Mr. P. Geoffrey West, a veterinary surgeon, who joins the staff from the Foreign Office. The receipt was reported of many further resolutions from Divisions in support of the Association's stand in the matter of increased status and salaries of veterinary officers of the whole-time staff of the Ministry of Agriculture; also a most welcome one from the newly formed East African branch of the Association.

By noon the members had entered upon the admirable series of demonstrations and papers which will be fully recorded in these columns in due course. In the meantime, it should be said that both the proportions of the attendance and the virility of the discussions at the sessions devoted to the consideration of the papers presented to Congress amply justified the Provisional Committee in its selection of subjects, essayists and openers of discussions, the debates being rendered the more informative and representative of the general body of members by the procedure of advanced circulation of papers.

On Monday afternoon, under the Chairmanship of Mr. J. N. Ritchie, members discussed Professor G. F. Boddie's study of "Toxicological Problems in Veterinary Practice" with Dr. H. H. Green and Mr. T. M. Mitchell as openers. On the following morning Mr. R. W. Johnston presided over the discussion on Mr. A. J. Kennedy's paper—"Retention of the Placenta in the Bovine," opened by Mr. A. S. Chapman and Mr. J. M. Rorrison, while at Wednesday morning's session under Mr. D. C. Matheson "The Immunology and Epidemiology of Virus Diseases"—the subject of Mr. M. Crawford's paper—was considered, with Dr. W. M. Henderson and Dr. D. R. Wilson as openers of the discussion.

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This preliminary account of the early stages of what gives every indication of being a memorable Congress cannot close without reference to the great success which attended two of the major social events already held—the delightful receptions at the Freemasons' Hall and at the City Chambers respectively.

At the first of these on the Tuesday evening, the President and Mrs. Mitchell received and entertained a great company of members and other friends, while on the evening of the following day the Association was accorded the honour of a Civic Reception as the guests of the Corporation of the City of Edinburgh.

Finally, Professor Robertson (the Local Secretary) and his willing band of co-operators must be congratulated warmly upon the achievement of an amazing standard of efficiency in organization. The major portion of the College appears to have been placed at the disposal of the Association, and guidance is everywhere at hand.

(*To be continued*)

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Ministry of Agriculture — Veterinary Appointments

In our issue of July 19th we published the Resolution of the Special Meeting of Council, N.V.M.A., rejecting the Ministry's salary scale for its veterinary officers, together with Divisional Resolutions in support of the action taken by Council. Since that date, two further Divisional Resolutions have been received: one, from the North of Scotland Division, was reproduced on page 373 of our last issue; the other is as follows:—

Southern Counties Division Resolution

At a meeting of the Southern Counties Veterinary Society held on Tuesday, July 22nd, the following Resolution was passed unanimously:—

> "The Southern Counties Division wholeheartedly supports the N.V.M.A. in its efforts to improve the salaries and conditions of service of the whole-time staff of the Ministry of Agriculture."

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"Shortage of Veterinary Inspectors Delays Attestation"

In its issue of July 22nd the *Farmer and Stock-Breeder* states: "Replying to a complaint from Carmarthenshire, the Ministry of Agriculture says that delay in dealing with applications for attestation is due to the country-wide shortage of veterinary inspectors, but in future the work of testing would take only two days instead of three. Carmarthen leads the country with 3,797 attested herds."

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Veterinary College of Ireland

Professorial Staff Honoured by University College, Dublin

On July 18th honorary degrees of Masters of Veterinary Science were conferred, for the first time, at University College, Dublin, on the five professors of the staff of the Veterinary College of Ireland.

The recipients were:—Professor T. G. Browne, Dean of Faculty in the University; Professors W. Kearney, A. F. O'Dea, J. A. Nicholson and P. A. McGeady.

The degree is a post-graduate one, and was created on the introduction at U.C.D. last year of the new Faculty of Veterinary Science, in which students do a five-year course. Most of the work is conducted at the Veterinary College.

Under the new Faculty the Professors of the Veterinary College are recognized by the University.

Foot-and-Mouth Disease Research Committee

The Minister of Agriculture and Fisheries has reconstituted the Foot-and-Mouth Disease Research Committee with the following membership:—

Dr. A. N. Drury, C.B.E., M.D., F.R.S. (Chairman).
Dr. C. H. Andrewes, M.D., F.R.C.P., F.R.S.
Professor S. P. Bedson, M.D., D.Sc., F.R.C.P., F.R.S.
Sir Daniel Cabot, M.R.C.V.S.
Mr. T. Dalling, M.A., M.R.C.V.S.
Mr. T. Dalling, M.A., M.R.C.V.S.
Mr. R. E. Glover, M.A., B.Sc., F.R.C.V.S.
Dr. Russell Greig, PH.D., M.R.C.V.S., F.R.S.E.
Dr. I. A. Galloway, Director of the Foot-and-Mouth Disease Research Station, and Mr. F. A. Eveleigh of the Ministry of Agriculture have been appointed Secretaries of the Committee.

The terms of reference of the Committee remain as follows:—

"To initiate, direct, and conduct investigations into foot-and-mouth disease either in this country or elsewhere, with a view to discovering means of rendering the invasions of the disease less harmful to agriculture."

Biographical Notes

Dr. A. N. Drury is the Director of the Lister Institute of Preventive Medicine, a Fellow of the Royal Society, and has been a member of the Scientific Staff of the Medical Research Council and Lecturer in Special Pathology at the University of Cambridge.

Dr. C. H. Andrewes is a member of the Scientific Staff of the National Institute for Medical Research and a Fellow of the Royal Society.

Professor S. P. Bedson is Goldsmith's Professor of Bacteriology in London University at the London Hospital Medical College. He is a Fellow of the Royal Society and has much experience of virus research work.

Sir Daniel Cabot is Chief Veterinary Officer of the Ministry of Agriculture and Fisheries, a member of the Academie Vétérinaire de France and Vice-President of the Office International des Epizooties.

Mr. T. Dalling is Director of the Ministry of Agriculture and Fisheries Veterinary Laboratory at Weybridge, and was previously Professor of Animal Pathology at the University of Cambridge.

Mr. R. E. Glover is Director of the Laboratory Animals Bureau, Medical Research Council, and has been Superintendent of the Farm Laboratories of the National Institute for Medical Research. He has had much experience of virus research work.

Dr. J. Russell Greig is Director of the Moredun Institute of the Animal Diseases Research Association, Edinburgh.

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PERSONAL

Forthcoming Marriage.—Cruickshanks—Lawson.—The engagement is announced between Captain John Cruickshanks, B.Sc., M.R.C.V.S., elder son of Mr. and Mrs. A. Cruickshanks of Lintralhex Angus, and Joyce Lawson, elder daughter of Mr. and Mrs. F. C. Fielding, Vine House, Revidge Road, Blackburn, Lancs.

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Births.—Brown.—On July 17th, 1947, at The Retreat, Morpeth, to Elizabeth (*née* Craigs) and Geoffrey F. Brown, M.R.C.V.S.—a son.

Fraser.—On July 16th, at the Red House Nursing Home, Bletchley, to Dorothy, wife of J. R. Fraser, M.R.C.V.S.—a daughter.

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R.C.V.S. OBITUARY

Blunsom, William Brayne. Beresford House, Shephard's Way, Cirencester. Graduated London, December 10th, 1885. Died July 17th, aged 87 years.

Cumming, Duncan, Transy, Mannofield, Aberdeen. Graduated Edinburgh May 21st, 1895. Died July 24th, 1947.

Pritchard, Jason William, of Hove. Graduated London December 15th, 1892. Died July 20th, 1947.

Sutton, George Sudbury, Divisional Inspector, of the Veterinary Laboratory, Ministry of Agriculture, Weybridge, Surrey (late of Northampton). Graduated Edinburgh December 15th, 1925. Died July 23rd, 1947.

Mr. W. B. Blunsom, M.R.C.V.S.

Mr. William B. Blunsom, whose death we record with much regret was very popular in the hunting circles of the district in which he lived. He was one of the oldest members of the W.V.H. (Earl Bathurst's) Hunt, having followed the pack for nearly 80 years, during which time he hunted under no fewer than eight masters.

Though retired from practice, Mr. Blunsom was active until the day before his death. He was a staunch Conservative, being a member of the old-established Bull Club, his membership dating from 1899.

Mr. Blunsom was the son of the late John Blunsom, of Dyer Court, Cirencester, whom he assisted and then succeeded in practice as a veterinary surgeon. Mr. T. J. Reynolds, M.R.C.V.S., who became his partner and son-in-law, carries on the practice.

Mr. Blunsom is survived by one daughter. His wife died early this year.

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BRITISH MEDICAL ASSOCIATION

Proposed Commonwealth Medical Council

In his presidential address to the annual meeting of the British Medical Association, held in London last week, Sir Hugh Lett announced that the Council of the Association had recommended that affiliated and daughter associations in the Commonwealth should be invited to co-operate in establishing a British Commonwealth Medical Council.

The objects of the Council would be to develop and maintain closer contact between practitioners in the United Kingdom and in the Dominions and between medical practitioners in the various Dominions; to advance the status of British medicine; to stimulate discussions and exchange of advice on matters of common interest, and to promote an interchange of professional facilities. Unity within the profession was perhaps their greatest need to-day.

Advisory Bureau

It was also proposed, said Sir Hugh, to establish an Empire Medical Advisory Bureau at B.M.A. House for giving advice and help to those who came to this country from the Commonwealth and Colonies for post-graduate or undergraduate study. The work of the bureau would not be limited to giving advice on academic matters; it would help socially in many ways, for example, by assisting men to find accommodation and putting visitors in touch with their British colleagues.

We were living in days, he said, when the individual was coming to count for iittle, and there was a danger that excessive concentration of power in the hands of the State might tend to reduce all voluntary associations to an ancillary if not a decorative function. Yet in most great nations, certainly in all the Anglo-Saxon communities, innumerable voluntary associations—professional, cultural, economic, spiritual—had been the pioneers of all humanitarian development, the "cutting edge," as it were, of progress. It was true the present Government were anxious for voluntary effort to continue, "but Ministers and officials come and go and we must take thought for the future."

Demand for Safer Milk

A resolution calling upon the Minister of Health to ensure that more "safe" milk was made available to the public was passed unanimously.

Mr. A. Lawrence Abel (Marylebone), said that according to Professor Wilson in the *British Medical Journal*, in 1943, five to ten per cent. of the country's farms were producing tuberculous milk, and 1,500 to 2,000 deaths were due annually to bovine tuberculosis. A substantial proportion of the 190,000 infant deaths from epidemic diarrhoea in the last 25 years were due to impure milk. Twenty children a day died.

The meeting approved a statement of policy condemning membership of trade unions and other organizations so far as medical officers were concerned.

A "Robot" Telephone

When doctors complained of overworked wives who had to answer telephones, Dr. S. Wand, chairman of the General Practices Committee, said that for £80 a robot attachment could be put on a doctor's telephone. It told people who telephoned: "This is the robot telephone speaking. Dr. X is out, can I do anything for you?" The doctor received the message left by the caller when he played back a cylinder on which it had been recorded.

Sir Lionel Whitby, regius professor of physics at Cambridge University, has been elected President for 1948-49.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

Foot-and-Mouth Disease

Worcestershire.—Upper Astwood Farm, Hindlip, Worcester (July 24th).